

CLAIMS

1. A real-time service system using an interactive data communication, the system comprising:

5 a plurality of digital set-top boxes of users for replaying service contents selected by the user in real time through a television by being supplied through a telephone line of a very high-data rate digital subscriber line (VDSL),

a number of system operating device installed by a predetermined
10 region unit and connected to the plurality of digital set-top boxes of the users in a corresponding region via a telephone line of the VDSL for supplying the service contents required at a corresponding set-top box in real time by the interactive data communication with an arbitrary digital set-top box; and

15 a service providing device for storing various service contents received from a contents providing device and for supplying the corresponding service contents to a corresponding system operating device in real time in response to a service content request from the system operating device inputted through the Internet.

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2. The system of claim 1, wherein the system operating device includes:

a storing block for storing the service contents supplied from the

service providing device;

a media server for receiving the service contents supplied from the service providing device by connecting to the Internet through a cable or an optical cable and for temporally storing the same at the
5 storing block and outputting the same;

a multi-point distribution unit for setting a plurality of transmission paths for the service contents outputted from the media server and outputting the same; and

a private branch exchange for transmitting the service contents
10 from the multi-point distribution unit to a corresponding digital set-top box through a telephone line.

3. The system of claim 2, wherein the media server incorporates therein a function of a voice over Internet protocol (VOIP) router to
15 implement the VOIP service.

4. The system of claim 2, wherein the media server and the multi-point distribution unit are connected to each other through a communication network.

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5. The system of claim 4, wherein the transmission rate between the media server and the multi-point distribution unit is expressed in gigabits.

6. The system of claim 1, wherein the service providing device includes:

a first storing block for storing contents related to various
5 services;

a streaming server for transmitting the service contents stored at the first storing block to the system operating device through the Internet and for inputting the inputted service contents to the first storing block;

10 a switching block installed between the first storing block and the streaming server for switching a movement of the service contents between the first storing block and the streaming server;

a web/database server for transmitting the various service contents supplied from the contents providing device through the
15 Internet to the streaming server;

a second storing block for storing a subsidiary information of the service content stored at the first storing block; and

a manager personal computer (PC) for implementing search, insert, delete, update and reconstruction for the subsidiary information
20 stored at the second storing block by sending a data manipulation language (DML) to the web/database server.

7. The system of claim 6, wherein the first storing block are

separated to a multiple number in a physical sense, but they are one storing space in a logical sense and are expandable.

8. The system of claim 6, wherein the steaming server is at least
5 one.

9. The system of claim 6, wherein the subsidiary information stored at the second storing block is the serial number and position of each service contents, interface information of each service operating
10 device, interface information of the contents providing device, charging information and information required for the operation of the other service providing devices.

10. A method for implementing a real-time service system using
15 an interactive communication, the method comprising the steps of:

displaying an initial screen representing categories for a plurality of allowable service contents on a monitor of television related to the digital set-top box in response to the power on of the digital set-top box of a user;

20 if one of the plurality of categories is selected, transmitting a selection signal corresponding to the selected category created at the digital set-top box to a service providing device through a system operating device as well as displaying detailed selection items of the

selected category on the monitor of the television;

if one of the plurality of detailed selection items is selected,
generating a selection signal corresponding to the selection result at the
digital set-top box and transmitting the generated signal to the service
5 providing device through the system operating device;

transmitting the service contents based on the selection signal to a
corresponding digital set-top box through the service providing device;
and

replaying the service contents by the television related to the
10 digital set-top box.

11. The system of claim 1, wherein, in the digital set-top box,
personal information, e.g., name, address, the information of credit card,
identification (ID) card information or the like, of the user of a
15 corresponding digital set-top box are additionally stored in the ROM or
are stored at a memory including a magnetic card, an IC card or
hardware or the like, and a device to access the magnetic card, IC card
or hardware or the like is attached to the digital set-top box to be
utilized as the personal information and security and charging
20 information.